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# **Cuba: Soviet Military Deliveries in 1984**

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**An Intelligence Assessment**

NGA Review Completed

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GI 85-10235D  
October 1985*

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**An Intelligence Assessment**

This paper was prepared by [redacted]  
Office of African and Latin American Analysis, and  
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contributions from [redacted] It  
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**Cuba:  
Soviet Military Deliveries in 1984**

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**Key Judgments**

*Information available  
as of 1 September 1985  
was used in this report.*

In 1984 the Soviet Union—as it has every year since 1980—delivered a large quantity of military goods to Cuba. Shipments of weapons, ammunition, and naval vessels—as measured in tonnage—rose sharply as compared with 1983; this was offset somewhat by a decrease in the tonnage of military-associated goods. Overall 1984 military deliveries exhibited a 6-percent increase over the previous year, but are still significantly less than in 1981 and 1982.

The abrupt increase in Soviet military aid in 1981—more than double the average annual tonnage of the previous five years—was probably planned well in advance of 1981, and intended as a general modernization program for the Cuban armed forces. The overall pattern since 1981 may have been in response to Havana's concerns over the intentions of the new US administration. The bulk of the shipments came during the first two years, suggesting that the schedule may have been accelerated by Moscow to assuage Castro's fears. Beginning in mid-1984, however, and continuing into the first six months of 1985, the level of shipments has declined sharply, suggesting the near completion of the current military delivery cycle.

Principal features of the 1984 deliveries include:

- An increase for the second year in shipments of combat arms, ammunition, and naval vessels—46,100 metric tons. This exceeds the previous recent high of 45,500 tons delivered in 1981, but is still considerably less than the tonnage delivered during the Cuban missile crisis of 1962.
- A decrease for the second year in shipments of military-associated goods (spare parts, trucks, and other support equipment)—8,500 tons as compared with about 13,000 tons in 1983 and 35,500 tons in 1982.
- Among the most significant items delivered were a frigate, a submarine and several smaller naval combatants, and over 300 surface-to-air missiles.
- Other deliveries included a handful of fighter aircraft and about 75 medium tanks and 75 artillery pieces.

In addition to Soviet deliveries, East European countries last year—as they did in 1983—appear to have shipped approximately 5,000 tons of military-associated goods. These shipments are not followed as closely as Soviet deliveries.

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Most of the modern weapons and major equipment now in Cuban inventories have been delivered since 1980, although substantial deliveries have been made in each of the past nine years. These deliveries have enhanced the combat capabilities of each of the three branches of the Cuban armed forces—air, navy, and ground. Improvements in air defenses and the Cuban Air Force and Navy are especially significant and raise substantially the potential cost to the United States of any plan to neutralize Cuban military capabilities by invasion, airstrike, or blockade.

In dollar value, Cuba ranks fourth among Soviet Third World military assistance clients. For 1984, arms and military-associated goods have an estimated value of about \$660 million. This compares with a figure of \$4.6 billion in Soviet general economic assistance (trade and development aid, and price subsidies) to Cuba for the same year. While the value of Soviet military aid has increased greatly since 1975, the value of general economic assistance has increased relatively more.

The Soviets maintain nearly 20,000 personnel in Cuba. More than half of these are civilian advisers on political or economic matters. Some 7,000 to 8,000 are military personnel, associated with either the Soviet combat brigade in Cuba, intelligence collection functions, or the military advisory group. The latter group, numbering 2,500 to 2,800, is involved in the planning and assimilation of advanced Soviet arms into the Cuban armed forces. We assess that it has been relatively constant in size over the past few years.

We expect that Cuba will continue to modernize all three branches of its armed forces over the next few years—albeit not at the pace of the past five years. Economic constraints, already evident in current austerity measures taken by Cuba, could possibly retard the assimilation of additional weapons into the Cuban armed forces.

Further expansion in air defenses probably will take place and could include the delivery of additional surface-to-air missiles of types already in Cuba—SA-2s, SA-3s, and mobile SA-6s. Other, less likely, weapon deliveries would be the long-range, high-altitude SA-5 and the MIG-25 interceptor aircraft—

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Other force modernization probably will include continued expansion or improvements in both Cuban naval and ground forces. Additional Foxtrot-class submarines, or a new type diesel submarine, may be acquired. Antisubmarine warfare forces might be enhanced by delivery of a third Koni-class frigate and additional MI-14 Haze helicopters. Additional Osa-II-class guided-missile attack boats and Turya-class torpedo boats will probably be acquired, and the larger Nanuchka-class patrol boat will possibly be introduced. Within the ground forces, continued emphasis is expected on acquisition of mobile point air defense systems—to include two new weapons, the SA-13 and possibly the SA-8, which Cuban forces are probably operating in Angola.

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Shipments of Soviet arms through Cuba might conceivably be boosted if the military situation in Angola or Nicaragua should deteriorate further. Under these circumstances, additional Soviet military assistance to both countries can be expected. As in the past, some of this aid may be channeled through Cuba.

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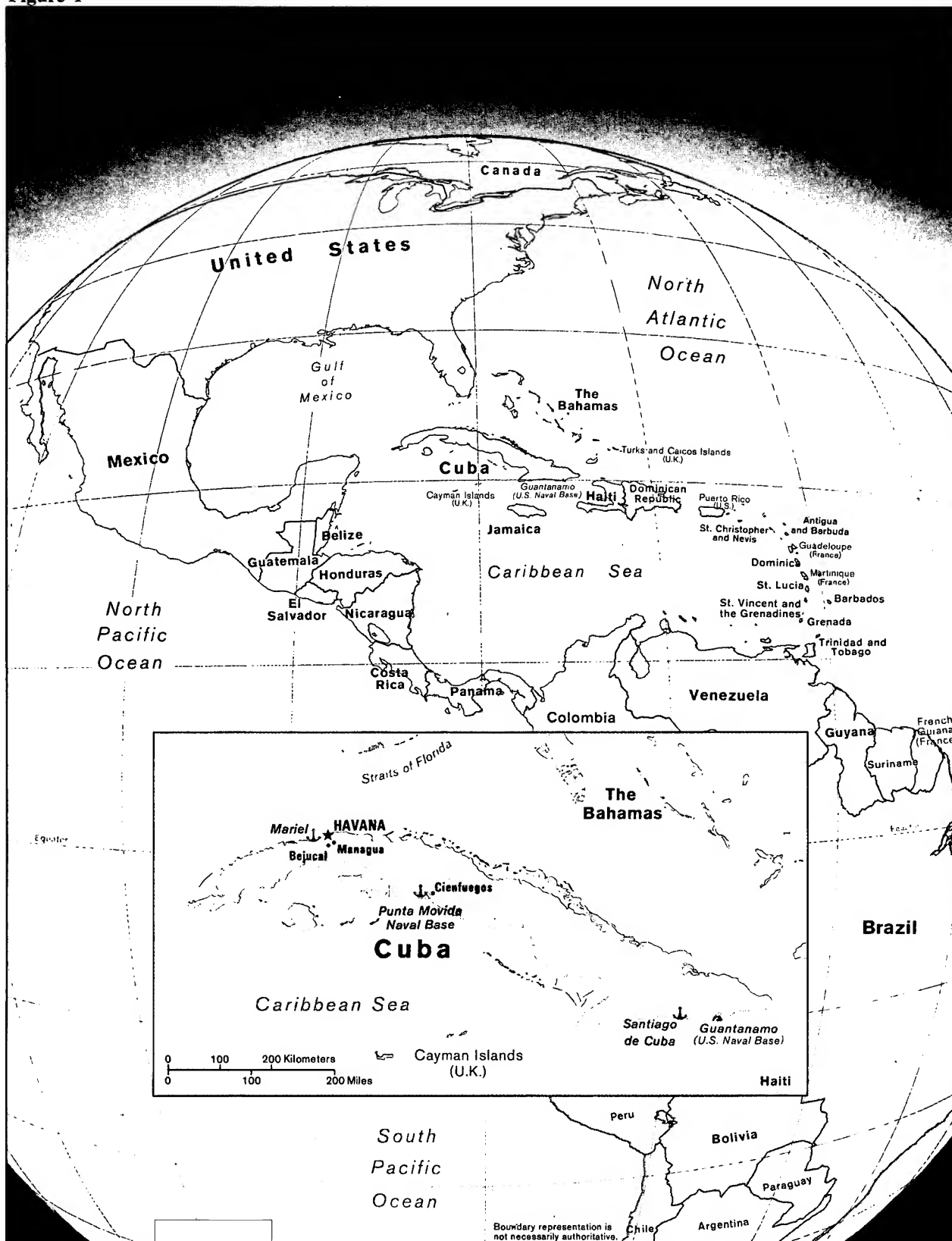
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Figure 1



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## Cuba: Soviet Military Deliveries in 1984

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### Introduction

This paper sets out the available information on shipments of major arms and military-associated equipment from the Soviet Union to Cuba during 1984, identifies and discusses trends in weapons deliveries, and assesses the impact of new equipment on Cuban military capabilities.<sup>1</sup>

There are limitations to the completeness of the data upon which the paper is based:

- Only seaborne deliveries are included. While certain fragile or high-priority equipment may be shipped by air (for example, electronics and some spare parts), we believe that the magnitude of these shipments is not significant. In any case, all major weapon systems would normally be sent by sea.

### Trends and Patterns in Military Aid

#### General Patterns in 1984

Overall Soviet seaborne military deliveries to Cuba in 1984 totaled an estimated 54,600 metric tons—an increase of about 6 percent over the amount shipped in 1983, but significantly less than the totals for 1981 and 1982 (table 1).<sup>2</sup> The increased 1984 level of arms and military-associated equipment was delivered on 46 Soviet-flag voyages, six less than observed in 1983. Deliveries (as measured in tonnage) tapered off throughout the year, from about 19,000 tons in the first quarter, to about 8,000 tons in the last—an unusual annual pattern. This pattern, taken together with an exceptionally low level of deliveries for the first six months of 1985 (see page 3), suggests the near completion of the current delivery cycle (figure 2). Given strong Cuban concern about the intentions of the new US administration in 1981, it is likely that Havana urged Moscow to accelerate the shipment of military equipment otherwise scheduled for more even delivery over the 1981-85 time period.

#### Major Arms Deliveries

In 1984, Soviet shipments of combat arms and ammunition to Cuba (most of which historically have come from the Black Sea port of Nikolayev South) amounted to 41,870 tons, which represents an increase of 11 percent over the amount delivered in 1983 (table 1).<sup>4</sup>

<sup>2</sup> The appendix contains a discussion of specific aspects of the methodology used in identifying and determining the magnitude of Soviet military deliveries to Cuba.

<sup>3</sup> All tonnages expressed in this paper are metric (1 metric ton equals 2,205 pounds).

<sup>1</sup> The terms "arms," "weapons," or "military deliveries" as used in this assessment include weapon systems, ammunition, and naval vessels; the term "military-associated goods" includes items such as spare parts, trucks, and field kitchens.

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**Table 1**  
**Soviet Deliveries of Military Goods to Cuba,**  
**1962-84, Selected Years**

	Identified Military Deliveries <sup>a</sup>		Military-Associated Deliveries <sup>b</sup>		Naval Deliveries <sup>c</sup>		Total
	Ship Voyages	Tonnage	Ship Voyages	Tonnage	Ship Voyages	Tonnage	
1962	125	250,000					250,000
1965	5	10,800					10,800
1970	8	11,300					11,300
1975	8	13,900					13,900
1976	13	19,500					19,500
1977	10	21,600					21,600
1978	12	22,200					22,200
1979	12	17,300					17,300
1980	14	20,900					20,900
1981	24	45,500	21	18,200			63,700
1982	15	24,540	47	35,470	6	3,730	63,735
1983	20	37,690	32	12,970	2	710	51,370
1984	23	41,870	23	8,510	6	4,220	54,600

<sup>a</sup> Figures through 1981 include all military deliveries originating in Nikolayev South since it began operations in the mid-1960s, plus confirmed arms tonnages originating in other Soviet ports, including naval craft carried on the decks of merchant ships. Beginning in 1982, the tonnage of all naval craft and vessels delivered is listed separately.

<sup>b</sup> Military-associated goods such as trucks, field kitchens, bulldozers, and so forth that were shipped to Cuba from ports other than Nikolayev South.

<sup>c</sup> Incorporated in 1982 estimates as a separate category; includes for the first time ships delivered under tow or their own power as well as small naval craft such as patrol boats carried by merchant ships, which were included in prior years' tonnages.

The tonnage of naval vessels delivered rose to 4,220 tons from 710 in 1983. The total tonnage of weapons, ammunition, and naval vessels delivered in 1984—some 46,100 tons—exceeds the 45,500 tons delivered in 1981 and is higher than any year since 1962, when 250,000 tons were delivered during the Cuban missile crisis. [ ]

The number of delivery voyages carrying arms and ammunition increased from 20 in 1983 to 23 in 1984, all of which departed from Nikolayev; all unloaded at the Cuban arms receiving port of Mariel. Eighteen transited directly to Cuba while five made intermediate port calls where we estimate a portion of the military cargo was unloaded. [ ]

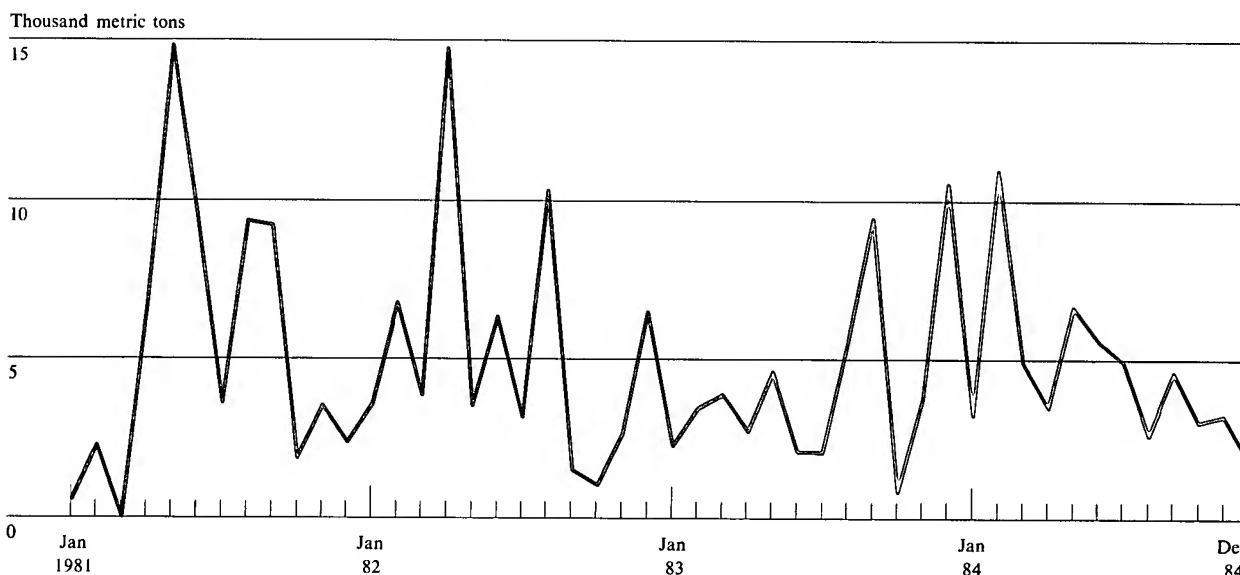
In contrast to 1983 when ground forces appeared to benefit most from Soviet military deliveries, naval and air defense forces appear to have been the primary beneficiaries in 1984 (table 2). Among the major items of naval equipment observed in 1984 deliveries were a Koni-class frigate, a Foxtrot-class submarine, nine Zhuk-class patrol craft, and two Yevgenya-class minesweepers. Air force and air defense equipment noted include four MIG-21 and three MIG-23 fighters, as well as over 300 SA-2 and SA-3 missiles.<sup>5</sup> Major ground forces equipment observed included 76 medium tanks, 31 armored personnel carriers, and 76 artillery pieces. [ ]

<sup>5</sup> In addition to these weapons, Cubana Airlines, which frequently carries military cargoes and personnel, received its first IL-76 heavy transport aircraft in 1984; this aircraft is not included in the tonnage totals of this study. A second IL-76 was delivered in early 1985. [ ]

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**Figure 2**  
**Soviet Military Deliveries, by Month, 1981-84**



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#### **Military-Associated Equipment**

While combat arms shipments continued to increase, deliveries of military-associated goods such as spare parts, trucks, and other support equipment continued to decrease. In 1984 an estimated 8,510 tons—one-third less than in 1983—were delivered on 23 voyages. This contrasts with the peak year of 1982, when 35,470 tons were delivered on 47 voyages. Of the 23 ships carrying materiel in this category in 1984, all but four departed from Leningrad, and all but two unloaded in Havana.

vessels to Cuba have declined by 70 percent in terms of tonnage over the comparable period in 1984. Less than 10,500 tons of arms have been delivered on nine ship voyages in the first half of 1985. An estimate is not yet available for military-associated deliveries.

Significant military equipment received by Cuba to date includes a Sonya-class minesweeper and two Stenka-class patrol boats. Other equipment delivered in 1985 includes air defense radars and several T-54/55 tanks.

#### **Shipments From Non-Soviet Sources**

As in 1983, a substantial volume of significant military and nonmilitary goods were provided by East European suppliers. These shipments are not included in the tonnage tabulations presented here. Shipments from Poland, East Germany, Czechoslovakia, Romania, and Bulgaria in 1984 amounted to at least 5,000

Large fluctuations in shipments year to year may be normal.

#### **Delivery Trends in 1985**

A preliminary assessment of the shipping data for the first six months of 1985 indicates that Soviet shipments of major weapons, ammunition, and naval

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Table 2

**Soviet Military Deliveries to Cuba:  
Selected Weapon Systems and Equipment, 1976-84<sup>a</sup>**

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	1976	1977	1978	1979	1980	1981	1982 <sup>b</sup>	1983	1984 <sup>c</sup>	Total
<b>Ground</b>										
Tank, T-54/55, medium					30			73	31	134
Tank, T-62, medium, 115 mm	50					10		107	45	212
APC, BTR-60, 60P, 660PB					45	26			31	102
Infantry fighting vehicle, BMP				24	6	9				39
Antitank gun, 57-mm, M-1943, ZIS-2						71		82		153
Antitank gun, 85-mm M-45						29		40		69
Antitank gun, 100-mm, T-12					51	44		64		159
Air defense artillery, self- propelled, 23-mm ZSU-23/4	15		7							22
Air defense artillery, 23-mm, ZU-23						17				17
Air defense artillery, 57-mm, S-60					36					36
Rocket launcher, 122-mm, BM-21	40							12		52
Howitzer, self-propelled, 122-mm, M-1974							5			5
Howitzer, 122-mm, D-30								12	46	58
Field gun, 130-mm, M-46						12		24	30	66
Howitzer, self-propelled, 152-mm, M-1973							3			3
<b>Air/air defense</b>										
Fighter, MIG-21, Fishbed/ Mongol	3	13	14	2	21	26	35	6	4	124
Fighter, MIG-23, Flogger			12			4	20	3	3	42
Transport, AN-26, Curl			5	15		4		2	4 <sup>d</sup>	26
Helicopter, MI-8, Hip			22	3						25
Helicopter, MI-14, Haze								4		4

Footnotes appear at end of table.

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**Table 2**

**Soviet Military Deliveries to Cuba:  
Selected Weapon Systems and Equipment, 1976-84<sup>a</sup> (continued)**

	1976	1977	1978	1979	1980	1981	1982 <sup>b</sup>	1983	1984 <sup>c</sup>	Total
Helicopter, MI-17, Hip H								15		15
Helicopter, MI-24, Hind							12			12
Missile launcher, SAM, SA-3, Goa	9	3	6							18
Missile, SAM, SA-2, Guideline						46			106	152
Missile, SAM, SA-3							230	14	206	450
Missile, SAM, SA-6					20					20
Missile, SAM, SA-9 TEL							3	8		11
Electronic warfare equipment					4	3			6	13
Radar, Fan Song E						3				3
Radar, Odd Pair						2				2
Radar, Back Trap						2				2
Radar, Flat Face B									8	8
Radar, Spoon Rest D									6	6
Radar, Thin Skin B									3	3
<b>Naval</b>										
Frigate, Koni class						1			1	2
Submarine, F-class				1	1				1	3
Missile attack boat, Osa-II class	1	1	3	2		2	4			13
Hydrofoil patrol craft, Turya class				2	2	2		3		9
Patrol boat, Zhuk class	2	4			6				9	21
Coastal minesweeper, Sonya class					1	1				2
Inshore minesweeper, Yevgenya class		2	1	2	2	2	1		2	2
Degaussing ship, Pelym class							1			1
Landing ship, medium Polnocny class							2			2

<sup>a</sup> Included are estimates of the most significant items by quantity. Numbers are minimum counts and include only items confirmed on imagery. Totals for some equipment, such as T-62 tanks and BM-21 multiple rocket launchers, include deliveries both to Cuban forces and, possibly, to the Soviet brigade there.

<sup>c</sup> Of 76 medium tanks delivered in 1984, only 24 were identifiable as to type (T-54/55s). As an approximation, the 1983 distribution between T-54/55s and T-62s was applied to 1984; hence, of the 76, 31 are assumed to be T-54/55 types, and the remainder assumed to be the more modern T-62. Of the 76 single-tube field artillery, 46 were identifiable as 122-mm, D-30 howitzers; the remainder were assumed to be M-46s, which featured prominently in 1983 deliveries.

<sup>d</sup> Two AN-26 aircraft were delivered in 1984, but were probably assigned to Cubana Airlines.

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### **Mechanics of Soviet Arms Shipments to Cuba**

**Soviet-Origin Ports**

*The special port facility south of Nikolayev on the Black Sea is the shipping point for almost all weapons, weapons support systems, and munitions transferred from the Soviet Union to the Third World. This port, dating from the late 1960s, has been expanded twice over the last 10 years and handles only military equipment. Since 1980 the Soviets have shipped an average yearly total of over 400,000 metric tons of military equipment from Nikolayev South. In the same period, Cuba has received on the average about 9 percent of that total.*

*All of the 23 ships carrying arms to Cuba in 1984 departed from Nikolayev South.*

*Military-associated equipment, by contrast, is usually delivered in small quantities aboard vessels carrying commercial cargoes. Historically, the port of Leningrad—the largest in the Soviet Union—handled most such cargoes bound for Cuba. In 1984, 19 of the 23 shipments of military-associated goods originated*

*at Leningrad; the four exceptions originated from Ilichevsk on the Black Sea.*

**Cuban Receiving Ports**

*Mariel is the primary Cuban arms receiving port. It is also the major transshipment port for weapons being sent overseas from Cuba. Mariel's location about 40 kilometers west of Havana affords a degree of security during loading and unloading operations. The cargo-handling capacity of the port of Mariel has been expanded greatly since 1983, and construction of two large warehouses is under way. When complete, the warehouses will permit easier concealment of arms being received or shipped from Cuba. All of the 23 Soviet arms shipments originating in Nikolayev South in 1984 went to Mariel.*

*Ships bringing military-associated cargoes to Cuba typically unload at Havana because of the commercial consignments also on board. Of the 23 voyages carrying such cargoes to Cuba in 1984, 21 went to Havana. The other two delivered their cargoes at Mariel and Santiago de Cuba, Cuba's major port on the eastern end of the island.*

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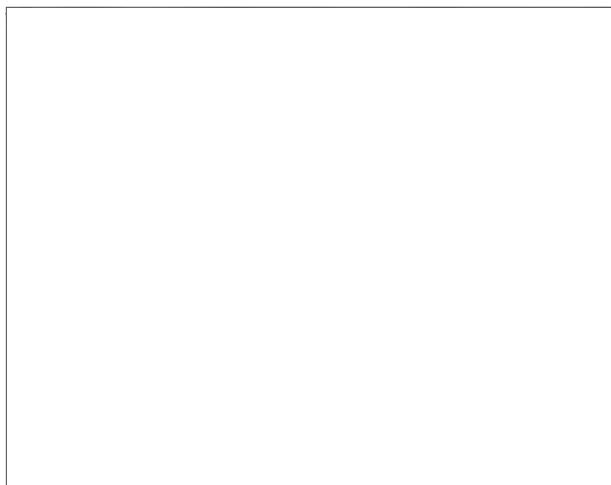
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than in 1983. We believe that shipments may have included several antiquated T-34 tanks. As with Ethiopia, practically all weapons and military equipment delivered to Angola come from the Soviet Union or Eastern Europe on national-flag vessels. We remain unable to quantify what proportion of Soviet military shipments to Cuba have been transferred to other countries. We believe the amount to be small, however, and assess that most of the weapons, ammunition, and equipment transferred is old and is being replaced by new material from the Soviet Union.

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### **Impact of Arms Deliveries on Cuban Military Capabilities**

tons—about the same as in 1983. Goods shipped consisted primarily of military-associated equipment, such as trucks and other vehicles, spare parts, electronics and telecommunications gear, medical material, and clothing. Some military goods were delivered, however, including explosives, fuses, and detonators. In addition, a large amount of sporting ammunition was delivered, some of which was probably used by the military for target practice and other training activities. [REDACTED]

#### **Transshipment of Arms to Other Nations**

Cuba has served in the past as a conduit for arms and military equipment to other Soviet client states in the Third World. Prior to the downfall of the Bishop regime in 1983, Grenada constituted a prominent example of this activity. Cuba continues to fulfill this role with respect to Nicaragua and Angola, albeit to a lesser extent. During 1984, [REDACTED]

[REDACTED] Cuba was shipping weapons, ammunition, and military equipment to Nicaragua on the frequent (four to five per month) ship voyages between Cuba and Nicaragua as well as on the civilian and military air flights (up to 30 per month). However, the major deliveries of military equipment to Nicaragua during 1984 continued to arrive on Bulgarian and Soviet ships. [REDACTED]

Cuba was less active in 1984 in delivering Soviet-origin weapons and military equipment to Angola

#### **Overview**

The operational inventory of the Cuban armed forces has exhibited both growth and evolution toward a more sophisticated combat force since 1975. Moreover, significant additional capabilities have been acquired with the delivery by the Soviet Union of equipment new to the Cuban armed forces. According to our estimates, the Cubans also have contributed to this upgrading of their capabilities by increasing the number of active-duty military personnel to about 160,000 (in 1977 the number was about 125,000) and greatly bolstering their reserve forces. In addition, there have been substantial improvements in training and an extensive military base construction program for all the services. [REDACTED]

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#### **Patterns and Priorities**

Quantities of major weapon systems and equipment delivered to Cuba beginning in 1976—the year after Cuba's intervention in Angola—have been substantial. Weapons and equipment received were used to modernize and enhance the combat capability of all branches of the Cuban armed forces. The emphasis of deliveries to the various branches, however, have varied greatly over time (table 2). [REDACTED]

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At the outset of the 1975-85 period, priority appears to have been placed on delivery of ground forces

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equipment, particularly the more modern T-62 medium tank and specialized artillery. Deliveries of ground forces equipment then slackened and were negligible until 1980. Significant deliveries of all types of aircraft began in 1977 and began to taper off only in 1984. Similarly, from 1979 to 1981, strong emphasis was placed on the Cuban Navy; during that period two modern diesel submarines; a Koni frigate; and some 24 missile attack boats, patrol craft, and mine-sweepers were provided. The year 1981 was unique in that deliveries appeared to show an equal emphasis on all Cuban forces across the board. In 1982, air defense forces, both fighter and surface-to-air missile, were given priority, while ground and naval forces deliveries were in a lull. [REDACTED]

Most of the modern weapons and major equipment now in Cuban operational inventories have been delivered since 1980.<sup>6</sup> These have enhanced the combat capabilities of each of the three major branches of the Cuban armed forces—air, navy, and ground. [REDACTED]

#### Air and Air Defense Forces

During 1984 the expansion in surface-to-air missile forces that began in 1981 continued, with the delivery by the Soviet Union of over 100 SA-2 and 200 SA-3 missiles, and 17 SAM-associated radars. Deliveries of aircraft to the Cuban Air Force tapered off, with the acquisition of only four MIG-21s and three MIG-23s. [REDACTED]

Improvements since 1980 in Cuban air defenses have been especially striking (table 3). The number of SA-3 launchers increased from an estimated 24 in 1980 to 39 by 1984. In addition, since 1980 one entirely new major tactical air defense system normally associated with the ground forces—the SA-9—was acquired. Several new SA-2 and SA-3 sites have been constructed—with some SA-3s permanently deployed for the first time in central Cuba—and SAM coverage has been extended into eastern Cuba with the establishment there of two SA-2 sites. Several existing SA-2 sites throughout Cuba have also been converted to dual-use SA-2/SA-3 sites. [REDACTED]

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The Cuban inventory of modern jet fighters/trainers has increased greatly, and we estimate that about 55 percent of the 230 currently operational modern jet fighters and trainers have been delivered since 1980. Of the newly delivered aircraft, many possess all-weather engagement capabilities. Cuba now has 45 MIG-23s; more than half of these are advanced interceptor models. The remainder are ground attack and trainer aircraft. [REDACTED]

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The transport and helicopter arms of the Cuban Air Force have also profited from Soviet assistance over the past four years. Since 1980 Cuba has acquired six to eight AN-24/26 transport aircraft. Older MI-8 medium-lift transport helicopters have continued to be supplemented or replaced by the newer MI-17 version, and the MI-24 heavy attack helicopter has been introduced. Because of these deliveries, the Cuban armed forces now have a contingent of 68 modern helicopters—many designed or armed for a ground attack role. [REDACTED]

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As a consequence of all improvements since 1980, the Cuban air defense system is now substantially more effective, flexible, and durable. Additional radars and SAMs have provided better coverage of the island, and the additional types of SAMs that have been deployed would make air attacks on the island far more difficult. The new aircraft possess improved performance characteristics, and new or expanded

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**Table 3**  
**Inventory <sup>a</sup> of Selected Cuban Air**  
**and Air Defense Force Weapons**  
**and Equipment, 1975, 1980, and 1985**

	1975	1980	1985
<b>Modern jet fighters/trainers <sup>b</sup></b>			
MIG-23	0	12	45
MIG-21 <sup>c</sup>	(95)	138	160
L-39 trainers	0	0	30
<b>Other aircraft <sup>b</sup></b>			
MI-24 attack helicopters	0	0	12
MI-8/17 helicopters	(3)	30	56
AN-24/26 transports	(2)	24	30
<b>Surface-to-air missile launchers</b>			
SA-2 <sup>d</sup>	102	120	132
SA-3 <sup>d</sup>	6	24	42
SA-6	0	20	20
SA-9	0	0	20

<sup>a</sup> Operational inventory only.

<sup>b</sup> Through 1980 there were also decreasing numbers of older aircraft.

<sup>d</sup> Includes only launchers associated with sites assessed to be primary occupied/operational sites (excludes dispersal sites). Based upon a recent reassessment.

Note: ( ) denotes substantially greater uncertainty.

airbases with hardened aircraft shelters contribute to wartime force survivability. Finally, the new command and control systems improve the overall responsiveness of the air defense force.

Cuban offensive air capabilities are also much improved—especially with the squadron of MIG-23 ground attack variants, which can carry six times the bomb load of the MIG-21. Military transport capabilities also have been enhanced by the delivery of several aircraft, including the IL-76 heavy-lift transport—assigned to Cubana Airlines. These aircraft, which are capable of lifting 40 tons from medium-length runways, can assist in supporting Cuban or other forces throughout the Caribbean area and much of Latin America.



**Figure 6. Cuban MI-24 Hind heavy attack helicopter**

#### Naval Forces

During 1984, one Koni-class missile frigate, one Foxtrot-class submarine, and nine Zhuk patrol boats were delivered to Cuba. The Zhuk patrol boats are assigned to the Cuban Ministry of Interior's Border Guard rather than the Navy.

Since 1980, Soviet military deliveries have resulted in a broad modernization of the Cuban Navy and have given it significant new capabilities (table 4). Deliveries during the last four years account for about one-third of the Cuban Navy's current inventory of combatants. Included are one of three submarines and two frigates, which have given the Cuban Navy a limited blue-water capability. Together with four new MI-14 Haze helicopters, these provide an antisubmarine warfare capability vastly improved over that of the low-endurance subchasers Cuba possessed during the early 1970s.

Most naval combatants acquired since 1980 have been missile boats or minesweepers. The patrol boat force, which has converted almost entirely from Komar-class to Osa-class missile boats since 1980,

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**Table 4**  
**Inventory <sup>a</sup> of Selected Cuban Navy**  
**Assets, 1975, 1980, and 1985**

	1975	1980	1985
Foxtrot submarines	0	2	3
Koni frigates	0	0	2
Guided-missile patrol boats			
Komar	(16)	6	3
Osa-I	5	5	5
Osa-II	1	7	13
Torpedo boats			
P-4/P-6/Komar conversion	(24)	(19)	13
Turya hydrofoil	0	4	9
Minesweepers			
Yevgenya	0	7	12
Sonya	0	1	3
Polnocny landing ship	0	0	2

<sup>a</sup> Operational inventory only.

Note: ( ) denotes substantially greater uncertainty.

now has about three times the missile-carrying capacity of a decade ago. The minesweeping force, nonexistent in 1975, has nearly doubled in size since 1980 and provides a new capability to keep Cuban harbors and coastal waters clear of mines.

The acquisition of two Polnocny-class landing ships in 1982 enhances the Cuban armed forces' amphibious capability, enabling it to deliver small, fully armed, combat units anywhere in the Caribbean.

#### Ground Forces

Deliveries during 1984 to Cuba's ground forces were substantial, although down from the previous year. Shipments included 76 medium tanks, 31 BTR-60 armored personnel carriers, and 76 field artillery pieces. Other equipment included 17 chemical warfare decontamination vehicles.

Major ground forces military deliveries from the Soviet Union since 1980 have included about 270

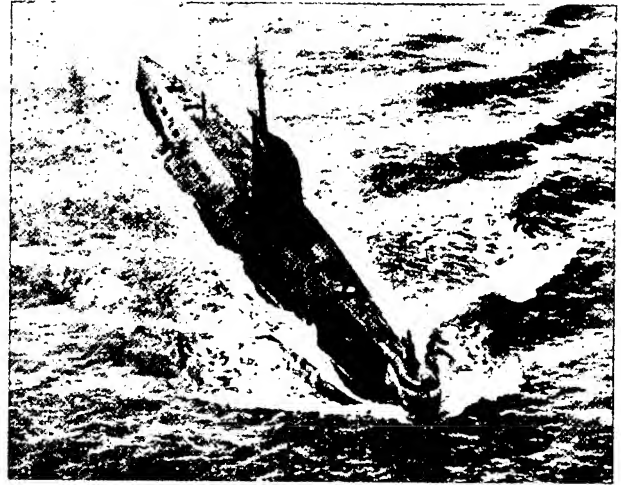


Figure 7. Cuban F-class submarine

tanks—perhaps half of which are the relatively more modern T-62 type. Among other armored equipment delivered over the period are about 60 BTR-60 armored personnel carriers and 140 field artillery pieces, including 12 BM-21 rocket launchers and a few self-propelled howitzers. In addition, Cuba's ground forces acquired nearly 350 antitank guns of various calibers and several air defense artillery weapons.

The formation in 1980 of the Cuban Territorial Militia, and its expansion to a current nominal strength of about 1.2 million, has been a key feature of strengthening Cuba's ground forces. The militia—essentially a lightly armed home guard—operates no heavy weapons or equipment. Thus its rapid growth has not been noticeably reflected in observed Soviet military deliveries.

Ground force developments since 1980 have emphasized improvements in mobility and firepower and have displayed an intention to present an attacker with potentially costly defense in depth. More of the active-duty divisional units are more mechanized than they previously were, and therefore more suited for a

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**Table 5**  
**Inventory <sup>a</sup> of Selected Cuban**  
**Ground Forces Weapons and Equipment,**  
**1975, 1980, and 1985**

	1975	1980	1985
Modern medium tanks			
T-62	0	50	(200)
T-54/55	(300)	630	780
Other armored vehicles			
BMP infantry combat vehicle	0	45	50
BTR-60 armored personnel carrier	(80)	340	410
BRDM reconnaissance vehicle	(40)	90	130
Field artillery			
M-1973 SP 152-mm howitzer	0	0	6
M-1974 SP 122-mm howitzer	0	6	18
B-21 122-mm multiple rocket launcher	(0)	40	72
130-mm field gun	(100)	110	175
122-mm howitzer	(140)	160	225
ZSU-23/4 SP air defense artillery	0	28	40

<sup>a</sup> Total estimated inventory.

Note: ( ) denotes substantially greater uncertainty.

fluid battlefield. Increases in firepower have been achieved by means of a large number of antitank weapons, larger caliber tanks, and mobile air defense equipment (table 5). While these measures do not approach the requirements of the type of high-intensity warfare that could be expected in Europe, they represent a substantial improvement over Cuba's ground combat capabilities of just five years ago.

#### Cost and Benefits to the Soviet Union of Military Aid to Cuba

##### General

We estimate that the value of all weapons and military-associated goods provided to Cuba by the Soviet Union in 1984 is on the order of \$660 million



**Figure 8.** Cuban M-1974 122-mm self-propelled howitzer

(figure 9).<sup>7</sup> This places Cuba in fourth rank (behind Iraq, Syria, and Libya) in dollar value of military assistance delivered by the Soviet Union to Third World client states in 1984. This military assistance is in addition to an estimated \$4.6 billion of general economic assistance—trade and development aid and price subsidies—also provided by the Soviet Union to Cuba in 1984. While the value of Soviet military aid provided Cuba in 1984 is substantially greater than in

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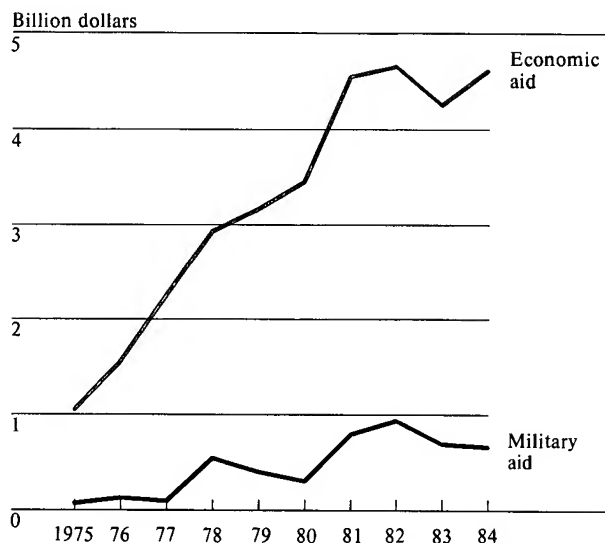
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**Figure 9**  
**Soviet Military and Economic Aid,**  
**1975-84**



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1975, the value of general economic assistance has increased relatively more over that same time period.

#### **Soviet Military Training and Assistance**

The Soviets maintain a presence in Cuba of nearly 20,000 personnel. More than half of these are civilian advisers on political or economic matters. Some 7,000 to 8,000 of the 20,000 are military personnel, associated either with the Soviet combat brigade in Cuba, signals intelligence or communications functions, or the military advisory group. The latter group—numbering 2,500 to 2,800 personnel—is thought to be involved in the planning and assimilation of advanced Soviet arms and equipment into the Cuban armed forces. The size of the group has been relatively constant over the past few years.

#### **The Benefit to the Soviet Union**

The USSR does not charge Cuba for the military aid it supplies. From Moscow's standpoint, the cost of supplying that aid is probably more than offset by a

variety of military and political benefits. These include Cuban assistance in penetrating the Western Hemisphere and influencing the Third World, the use of Cuba as a surrogate force, and the utilization of Cuban territory as a base for signal and other intelligence collection against the United States. Perhaps the greatest benefit, however, is the leverage Cuban military modernization may exert on US military planning. By forcing US contingency planners to allocate resources for maintaining the security of the Caribbean Basin, the Soviet Union evidently hopes to dilute US military power in other geographic areas of greater importance to Moscow—primarily the Eurasian continent.

#### **Outlook**

We expect Cuba to continue to modernize its armed forces over the next few years. We project improvements in all three branches of the Cuban armed forces, albeit probably not at the pace exhibited in the early 1980s.

#### **Trends in Military Modernization**

The trend toward expanding surface-to-air missile defenses in the central and eastern parts of the island will require additional SA-2 and SA-3 systems. Cuba will also probably receive additional SA-6 mobile SAMs. Improvements in command and control will be accompanied by deliveries of more radar and communications equipment.

Another—albeit less likely—weapon delivery is the long-range, high-altitude SA-5. This system has been delivered to only one other Soviet client state—Syria. Its deployment to Cuba would extend potential Cuban air defense coverage to southern Florida and the Keys.

The number of fighters and trainers in the Cuban inventory is expected to remain relatively stable over the next few years as the Cubans assimilate the aircraft received since 1980. However, replacement of

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older MIG-21s with either all-weather versions, or with MIG-23 interceptors, will probably continue at the current relatively slow pace. Expansion of airfield and hardened shelter capacity would probably be required in any case before any significant further growth in the fighter force occurs. A possible acquisition over the next few years might be the MIG-25 high-altitude interceptor or reconnaissance aircraft.

Similarly, the SU-22 ground attack aircraft—currently flown by Cuban pilots in Angola—might be introduced on the island. Introduction of this older aircraft would provide little additional capabilities, however.

Cuba will probably receive more short-range AN-26 or similar transport aircraft as well as MI-8/17 transport and MI-24 attack helicopters.

only two IL-76 transports are expected for Cubana Airlines, a change in Cuban heavy-lift requirements—especially for logistic support of Nicaragua—could result in the delivery of one or more additional IL-76s.

We assess that the Cuban Navy will continue to expand over the next several years. This judgment is based on the significantly increased capacities reflected in ship berthing and servicing facilities and barracks now in advanced stages of construction at various naval bases, as well as on observations of recent Cuban and joint Soviet-Cuban ASW exercise activity.

A significant expansion in Cuban submarine and ASW forces appears probable. Although the Cubans now possess only three Foxtrot submarines, there is adequate berthing capacity at the new submarine base near Cienfuegos to accommodate at least three or four more. Given the Cuban emphasis of the past few years on developing an ASW capability, a third Koni-class frigate may be acquired, as may additional MI-14 Haze ASW helicopters and new-model Turya-class hydrofoil patrol boats with sonar systems.

The Cubans could well continue to upgrade their coastal defense force by acquiring several more Osa-II-class—and possibly a few of the higher endurance Nanuchka-class—guided-missile patrol boats.

Depending on the Cuban assessment of the mine threat to their coasts and harbors, additional mine-sweepers may also be acquired.

We expect the Cuban ground forces to upgrade their firepower and mobility at a slow but steady pace, by continuing to integrate additional increments of types of weapons—including tanks, APCs, and self-propelled howitzers and air defense weapons—introduced over the past several years. This judgment is based on the extensive construction at ground forces units over the past several years, and on evidently incomplete unit complements of new equipment.

If additional active-duty divisions are created from existing reserve divisions, more T-62 tanks and armored personnel carriers may be delivered. In any case, continued emphasis is expected on acquisition of mobile point air defense weapons, such as the SA-9 SAM and ZSU-23/4 antiaircraft artillery units. Cuban forces in Angola probably are operating two additional low-altitude systems—the SA-8 and SA-13—

Cuban forces on the island might also receive the SA-8 as well.

Unless the role of Cuba's Territorial Militia evolves greatly from its current "home guard" function to that of a more heavily equipped (and expensive) reserve force, the magnitude of military deliveries for it is expected to be insignificant.

#### Factors Affecting New Weapons Deliveries

There are several factors that may affect the type and magnitude of military deliveries over the next few years. These include the military situation in Nicaragua, and economic and political constraints faced by both Cuba and the Soviet Union.

If the military situation faced by the Sandinista government in Nicaragua or the dos Santos regime in Angola deteriorates further, additional Soviet military assistance to both countries could be expected. Depending upon the character of the combat, that aid

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could include additional helicopters, air defense weapons, and armored vehicles. Low-performance combat aircraft might also be introduced. As in the past, some of this aid may be channeled through Cuba. [REDACTED]

According to various press reports, Cuban economic planners were put on notice by the Soviet Union during the course of the 1984 cycle of Council for Mutual Economic Assistance (CEMA) meetings that increased levels of economic aid would not be forthcoming, and that Cuba must make greater efforts to make efficient use of that aid, which the USSR is providing. Subsequently, there have been reports of limited austerity measures for the Cuban armed forces. In the absence of other factors (for example, a deteriorating situation in Angola or Nicaragua or new tensions with the United States), it seems likely that continued austerity for the armed forces would adversely affect the capacity to assimilate additional equipment. At an extreme, this may slow delivery of additional arms and constrain the delivery to Cuba of new types of weapons. Given the sharp reduction exhibited to date in 1985 arms deliveries, this process may already be under way. [REDACTED]

Deliveries of new types of weapons to Cuba are also dependent on Soviet assessments of the acceptability to the United States of such weapons in Cuban hands and the readiness of the United States to respond to provocative armaments. With the introduction into Cuba over the past several years of additional SAMs and more capable ground attack aircraft, submarines, and frigates, Moscow appears committed to strengthening Cuba's capability to defend against an air attack or possible naval blockade. It presumably understands that the delivery or permanent deployment to Cuba of clearly offensive weapons would cause a serious crisis. The Soviets would also probably be willing to expand Cuba's regional intervention capability (such as through additional IL-76 aircraft), but would move cautiously so as to gauge US reactions. [REDACTED]

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